Message

From: Maraldo, Dean [Maraldo.Dean@epa.gov]

Sent: 7/19/2018 7:04:20 PM

To: Brooks, J. Renee [Brooks.Reneej@epa.gov]; Kuefler, Patrick [kuefler.patrick@epa.gov]; Burdett, Cheryl

[burdett.cheryl@epa.gov]; Wilson, Jennifer [wilson.jenniferA@epa.gov]; Gunter, Kenneth

[gunter.kenneth@epa.gov]

Subject: Re: Additional plot

Thanks. I will cite sources in detail and provide explanations once I get a chance to start writing. At this point I'm just analyzing data and creating figures and graphs.

Dean Maraldo

Water Enforcement & Compliance Assurance Branch

U.S. EPA - Region 5

77 West Jackson Blvd. (WC-15J)

Chicago, Illinois 60604 ph: (312) 353-2098 fax: (312) 385-5394

e-mail: maraldo.dean@epa.gov http://www.epa.gov/enforcement/

From: Brooks, J. Renee

Sent: Thursday, July 19, 2018 1:45 PM

To: Kuefler, Patrick; Maraldo, Dean; Burdett, Cheryl; Wilson, Jennifer; Gunter, Kenneth

Subject: RE: Additional plot

Hi Dean and Patrick,

Ex. 5 Deliberative Process (DP)

Kendall, C., E. M. Elliott, and S. D. Wankel. 2007. Tracing Anthropogenic Inputs of Nitrogen to Ecosystems. Pages 375-449 *in* R. Michener and K. Lajtha, editors. Stable Isotopes in Ecology and Environmental Science. Wiley.

Renee

From: Kuefler, Patrick

Sent: Thursday, July 19, 2018 9:45 AM

To: Maraldo, Dean <Maraldo.Dean@epa.gov>; Brooks, J. Renee <Brooks.Reneej@epa.gov>; Burdett, Cheryl

<burdett.cheryl@epa.gov>; Wilson, Jennifer <wilson.jenniferA@epa.gov>; Gunter, Kenneth

<gunter.kenneth@epa.gov>
Subject: RE: Additional plot

Ex. 5 Deliberative Process (DP)

From: Maraldo, Dean

Sent: Thursday, July 19, 2018 11:42 AM

To: Kuefler, Patrick <kuefler.patrick@epa.gov>; Brooks, J. Renee <Brooks.Reneej@epa.gov>; Burdett, Cheryl

<burdett.cheryl@epa.gov>; Wilson, Jennifer <wilson.jenniferA@epa.gov>; Gunter, Kenneth

<gunter.kenneth@epa.gov>
Subject: Re: Additional plot

Ex. 5 Deliberative Process (DP)

From: Kuefler, Patrick

Sent: Thursday, July 19, 2018 11:37 AM

To: Maraldo, Dean; Brooks, J. Renee; Burdett, Cheryl; Wilson, Jennifer; Gunter, Kenneth

Subject: RE: Additional plot

Ex. 5 Deliberative Process (DP)

From: Maraldo, Dean

Sent: Thursday, July 19, 2018 11:30 AM

To: Kuefler, Patrick < <u>kuefler.patrick@epa.gov</u>>; Brooks, J. Renee < <u>Brooks.Reneej@epa.gov</u>>; Burdett, Cheryl

<burdett.cheryl@epa.gov>; Wilson, Jennifer < wilson.jennifer A@epa.gov>; Gunter, Kenneth

<gunter.kenneth@epa.gov>
Subject: Re: Additional plot

Ex. 5 Deliberative Process (DP)

From: Kuefler, Patrick

Sent: Thursday, July 19, 2018 11:17 AM

To: Maraldo, Dean; Brooks, J. Renee; Burdett, Cheryl; Wilson, Jennifer; Gunter, Kenneth

Subject: RE: Additional plot

Ex. 5 Deliberative Process (DP)

From: Maraldo, Dean

Sent: Thursday, July 19, 2018 10:27 AM

To: Brooks, J. Renee <Brooks.Reneej@epa.gov>; Burdett, Cheryl <burdett.cheryl@epa.gov>; Wilson, Jennifer

<wilson.jenniferA@epa.gov>; Gunter, Kenneth <gunter.kenneth@epa.gov>; Kuefler, Patrick

kuefler.patrick@epa.gov> **Subject:** Re: Additional plot

FYI, I created two maps with isotope ranges (shallow, deep).

From: Brooks, J. Renee

Sent: Tuesday, July 17, 2018 12:48 PM

To: Maraldo, Dean; Burdett, Cheryl; Wilson, Jennifer; Gunter, Kenneth

Subject: RE: Additional plot

Great plots Dean! What program are you using?

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Renee

From: Maraldo, Dean

Sent: Tuesday, July 17, 2018 9:48 AM

To: Brooks, J. Renee < <u>Brooks.Reneej@epa.gov</u>>; Burdett, Cheryl < <u>burdett.cheryl@epa.gov</u>>; Wilson, Jennifer

<wilson.jenniferA@epa.gov>; Gunter, Kenneth <gunter.kenneth@epa.gov>

Subject: Re: Additional plot

Renee: here are the dual isotope plots for 1) downgradient and upgradient of fields; 2) downgradient of CAFO only; 3) downgradient of fields by depths; 4) downgradient of CAFO by depth. I ran out of time and couldn't add a legend with point concentrations, but you'll get the general idea of scale.

Providing the spreadsheet as well.

Thanks, Dean

Dean Maraldo
Water Enforcement & Compliance Assurance Branch
U.S. EPA - Region 5
77 West Jackson Blvd. (WC-15J)
Chicago, Illinois 60604
ph: (312) 353-2098

fax: (312) 385-5394 e-mail: maraldo.dean@epa.gov http://www.epa.gov/enforcement/

From: Brooks, J. Renee

Sent: Monday, July 16, 2018 1:29 PM

To: Burdett, Cheryl; Wilson, Jennifer; Maraldo, Dean; Gunter, Kenneth

Cc: Kuefler, Patrick **Subject:** Additional plot

Hi All,

I made a new dual isotope plot that had point size indicate concentration. We should plan on skyping as well so we can share a screen. Dean, can you make a map of the site with NO3_NO2 concentration as the point size? Like those that you did for the isotopes.

Thanks and talk to you this afternoon. Renée

J. Renée Brooks
Western Ecology Division
NHEERL/ORD/EPA
200 SW 35th St
Corvallis, OR 97333
(541) 754-4684
Brooks.ReneeJ@epa.gov